Sharikadze, D V

S/020/60/133/02/13/068
B019/B060

AUTHORS: Dzhorbenadze, N. P., Sharikadze, D. V.

TITLE: Flow of a Viscous Conducting Liquid Between Two Porous Planes 21

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 2, pp. 299-302

TEXT: The authors assumed for their investigation that a constant homogeneous magnetic field exists perpendicular to the parallel planes. At the same time, liquid enters the interspace through one of the porous walls and leaves through the other porous wall. The amounts of the incoming and outgoing liquid are equal. The solution ansatzes of the main equations for magnetic hydrodynamics are given for the case under consideration. These are the components of the flow velocity of the liquid and those of the magnetic field, and the solutions must satisfy the system of equations (1). The solutions (3) of the system (1) are discussed, and the authors obtain equations (5) and (6) for the velocity

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Flow of a Viscous Conducting Liquid Between Two Porous Planes

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gradient perpendicular to the walls and the gradient of the field strength, respectively. Finally, the authors derive, from the above results, the solutions for a steady flow between solid planes. The authors thank Professor K. P. Stanyukovich and Professor D. Ye. Dolidze for their valuable advice and discussions. There are 8 references: 5 Soviet, 1 American, 1 British, and 1 Danish.

ASSOCIATION: Tbilisskiy matematicheskiy institut im. A. M. Razmadze Akademii nauk GruzSSR (Tbilisi Institute of Mathematics imeni A. M. Razmadze of the Academy of Sciences, GruzSSR). Tbilisskiy gosudarstvennyy universitet im. I. V. Stalina (Tbilisi State University imeni I. V. Stalin)

PRESENTED: March 15, 1960, by N. N. Bogolyubov, Academician

SUBMITTED: March 14, 1960

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L 15717-63 EPR/EPA(b)/EWT(1)/EPF(n)-2/EWG(k)/BDS/T-2/EEC(b)-2/ES(w)-2 AFFTC/
ASD/ESD-3/AFWL/IJP(C)/SSD Ps-4/Pd-4/Pu-4/Pz-4/Pab-4/Pi-4/Po-4 WW/AT
ACCESSION NR: AR3002656 S/0124/63/000/005/B012/B012

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SOURCE: Rzh. Mekhanika, Abs. 5B53

AUTHOR: Sharikadze, D.V.

TITLE: Two dimensional flow of incompressible viscous electrically conducting liquid near the critical point in a magnetic field

CITED SOURCE: Tr. Tbilissk. un-ta, v. 84, 1961 (1962), 193-201

TOPIC TAGS: two-dimensional flow, incompressible liquid, viscous liquid, conducting liquid, critical point, magnetic field, integro-differential equation, Reynolds number

TRANSLATION: The problem of the flow of a conducting, viscous, incompressible fluid against an infinite plane, considering the effect (on the fluid) of an external parallel magnetic field perpendicular to the plane was generalized for the case of nonstationary motion. This problem was studied earlier (see Neuringer, J.L., McIlroy, W., J. Aeronaut. Sci., 1958, 25, No. 3, 194-198 - Rzh. Mekh, 1960 No. 6, 6989). A determination of the flow in the neighborhood of

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the critical point is made. The problem of finding the component of the velocity in the magnetic field reduces to the solution of a system of two integro-differential equations, which are to be solved by the method of successive approximations, decomposing the unknown functions in series; for the terms of the series recurrence formulas are given, and an estimate is made of their convergence conditions.

It must be noted, that the boundary conditions which are used for the magnetic field at the wall are correct only for small values of the magnetic Reynolds number, but in this case, the magnetic field is already given for every current value. Analogously, in calculating the pressure on the wall the condition of the equality of the pressure in viscous and non-viscous flow is used, valid only for large Reynolds numbers, which the author does not stipulate.
V.P. Agafonov

DATE ACQ: 14Jun63 SUB CODE: PH ENCL: 00

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S/020/61/138/003/010/017
B104/B205

10.2000

AUTHOR: Sharikadze, D. V.

TITLE: A non-steady problem in magnetohydrodynamics

PERIODICAL: Doklady Akademii nauk SSSR, v. 138, no. 3, 1961, 568 - 571

TEXT: The non-steady flow of a viscous, incompressible liquid of finite conductivity about a plane plate has been studied proceeding from the system

$$\frac{\partial v_x}{\partial x} + \frac{\partial v_y}{\partial y} = 0; \quad (1)$$

$$\nu \frac{\partial^2 v_x}{\partial y^2} - \frac{\partial v_x}{\partial t} = v_x \frac{\partial v_x}{\partial x} + v_y \frac{\partial v_x}{\partial y} + \frac{1}{\rho} \frac{\partial p}{\partial x} \frac{\sigma B_0^2}{\rho} v_x; \quad (2)$$

$$\alpha \frac{\partial^2 T}{\partial y^2} - \frac{\partial T}{\partial t} = v_x \frac{\partial T}{\partial x} + v_y \frac{\partial T}{\partial y} - \frac{\nu}{c_p} \left(\frac{\partial u}{\partial y}\right)^2 - \frac{\sigma B_0^2}{\rho c_p} v_x - \frac{1}{\rho c_p} \frac{\partial p}{\partial x} - \frac{1}{\rho c_p} v_x \frac{\partial p}{\partial x}, \quad (3)$$

which is solved under the boundary and initial conditions

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$$v_x(x, y, 0) = v_x^0(x, y), \quad v_y(x, y, 0) = v_y^0(x, y),$$
$$v_x(x, 0, t) = v_y(x, 0, t) = 0, \quad v_x(x, \infty, t) = u_0(x, t), \qquad (5)$$
$$E(x, y, 0) = E^0(x, y), \quad E(x, 0, t) = E_{on}(x, t), \quad E(x, \infty, t) = E_\infty(x, t).$$

The relation $v_x = u_o(x,t)$ is assumed to hold for the velocity of flow outside the boundary layer. v_x and v_z are the vector components of the flow velocity in the boundary layer, and the pressure is supposed to be independent of y. This problem has been analyzed by Kossow (NaCa Report., 1358 (1958)) and Cess (J. Heat Transfer (Trans. ASME, Ser. C), 82, no. 2 (1960)) for the steady case. The author presents the solution in the form of an integral equation which is solved in successive approximation. The Green function

$$G(y, \eta, t) = -\frac{1}{2\sqrt{\pi\nu t}} \exp\left[-\frac{(y-\eta)^2}{4\nu t}\right] + \int_0^t \frac{\exp\left[-\frac{\eta^2}{4\nu t} - \frac{y^2}{4\nu(t-\tau)}\right] y}{4\pi\nu\sqrt{\tau}(t-\tau)^{3/2}}\, d\tau, \qquad (7)$$

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A non-steady problem...

makes it possible to write the solutions in the form

$$v_x(x, y, t) = V_1(x, y, t) +$$

$$+ \int_0^t d\tau \int_0^\infty \left(v_x \frac{\partial v_x}{\partial x} - \frac{\partial v_x}{\partial \eta} \int_0^\eta \frac{\partial v_x}{\partial x} d\eta + v_x \frac{\sigma B_0^2}{\rho} \right) G(y, \eta, t - \tau)\, d\eta; \quad (8)$$

$$E(x, y, t) = V_2(x, y, t) + \int_0^t d\tau \int_0^\infty \left(v_x \frac{\partial E}{\partial x} - \frac{\partial E}{\partial \eta} \int_0^\eta \frac{\partial v_x}{\partial x} d\eta \right) G(y, \eta, t - \tau)\, d\eta, \quad (9)$$

where $V_i(x,y,t)$ satisfies the heat-conduction equation

$$\nu \frac{\partial^2 V_i}{\partial y^2} - \frac{\partial V_i}{\partial t} = F_i(x, y, t), \quad i = 1, 2, \quad (10)$$

under conditions (5). For a≤x≤b it is shown that any continuous function $\Phi(x,y,t)$ can be represented by

$$\Phi(x, y, t) = \lim_{z \to 0} \frac{1}{\sqrt{\pi z}} \int_a^b \Phi(\xi, y, t)\, e^{-(x-\xi)^2/z}\, d\xi, \quad (12)$$

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if $a < x < a$. Using Eq. (12) it is shown that the solution of (8) and (9) can be derived from the solutions of

$$u = \delta \int_0^t d\tau \int_0^\infty d\eta \int_a^b \left(u \frac{\partial u}{\partial \xi} - \frac{\partial u}{\partial \eta} \int_0^\eta \frac{\partial u}{\partial \xi} d\eta + \frac{\sigma B_0^2}{\rho} u \right) G(y, \eta, t-\tau)\, e^{-(x-\xi)^2/z} \frac{d\xi}{\sqrt{\pi z}} + \\ + V_1(x, y, t); \qquad (13)$$

and

$$h = \delta \int_0^t d\tau \int_0^\infty d\eta \int_a^b \left(u \frac{\partial h}{\partial \xi} - \frac{\partial h}{\partial \eta} \int_0^\eta \frac{\partial u}{\partial \xi} d\eta \right) G(y, \eta, t-\tau)\, e^{-(x-\xi)^2/z} \frac{d\xi}{\sqrt{\pi z}} + \\ + V_2(x, y, t). \qquad (14)$$

by passing to $\lim_{z \to 0} u = v_x$, $\lim_{z \to 0} h = E$, $\delta = 1$. The solutions of the system

$$u = \delta \int_0^t d\tau \int_0^\infty d\eta \int_a^b \left(uv - w \int_0^\eta v\, d\eta + \frac{\sigma B_0^2}{\rho} u \right) G(y, \eta, t-\tau)\, e^{-(x-\xi)^2/z} \frac{d\xi}{\sqrt{\pi z}} + \\ + V_1(x, y, t),$$

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$$v = \delta \int_0^t d\tau \int_0^\infty d\eta \int_a^b \left(uv - w \int_0^\eta v\, d\eta + \frac{\sigma B_0^2}{\rho} u \right) G(y, \eta, t-\tau)\, e^{-(x-\xi)^2/z} \frac{2(\xi - x)}{\sqrt{\pi z^3}} d\xi + \frac{\partial V_1}{\partial x},$$

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$$\omega = \delta \int_0^t d\tau \int_0^\infty d\eta \int_a^b \left(uv - \omega \int_0^\eta v\, d\eta + \frac{\sigma B_0^2}{\rho} u \right) \frac{\partial G}{\partial y} e^{-(x-\xi)^2/z} \frac{d\xi}{\sqrt{\pi z}} + \frac{\partial V_1}{\partial y},$$

$$h = \delta \int_0^t d\tau \int_0^\infty d\eta \int_a^b \left(u\varphi - \psi \int_0^\eta v\, d\eta \right) G e^{-(x-\xi)^2/z} \frac{d\xi}{\sqrt{\pi z}} + V_2(x, y, t), \tag{15}$$

$$\varphi = \delta \int_0^t d\tau \int_0^\infty d\eta \int_a^b \left(u\varphi - \psi \int_0^\eta v\, d\eta \right) G e^{-(x-\xi)^2/z} \frac{2(\xi - x)}{\sqrt{\pi z^3}} d\xi + \frac{\partial V_2}{\partial x},$$

$$\psi = \delta \int_0^t d\tau \int_0^\infty d\eta \int_a^b \left(u\varphi - \psi \int_0^\eta v\, d\eta \right) \frac{\partial G}{\partial y} e^{-(x-\xi)^2/z} \frac{d\xi}{\sqrt{\pi z}} + \frac{\partial V_2}{\partial y}.$$

have the form of the series

$$u = \sum_{n=0}^{\infty} \delta^n u_n, \qquad v = \sum_{n=0}^{\infty} \delta^n v_n, \qquad \omega = \sum_{n=0}^{\infty} \delta^n \omega_n,$$

$$h = \sum_{n=0}^{\infty} \delta^n h_n, \qquad \varphi = \sum_{n=0}^{\infty} \delta^n \varphi_n, \qquad \psi = \sum_{n=0}^{\infty} \delta^n \psi_n. \tag{16}$$

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These series lead to solutions in the form of the recurrence formulas.

$$u_0 = V_1, \quad v_0 = \frac{\partial V_1}{\partial x}, \quad w_0 = \frac{\partial V_1}{\partial y},$$

$$u_{n+1} = \int_0^t d\tau \int_0^\infty d\eta \int_a^b \sum_{m=0}^{n} \left(u_{n-m} v_m - w_m \int_0^\eta v_{n-m} d\eta + \frac{\sigma B_0^2}{\rho} u_m \right) G e^{-(x-\xi)^2/z} \frac{d\xi}{\sqrt{\pi z}},$$

$$v_{n+1} = \int_0^t d\tau \int_0^\infty d\eta \int_a^b \sum_{m=0}^{n} \left(u_{n-m} v_m - w_m \int_0^\eta v_{n-m} d\eta + \frac{\sigma B_0^2}{\rho} u_m \right) G e^{-(x-\xi)^2/z} \times$$

$$\times \frac{2(\xi - x)}{\sqrt{\pi z^3}} d\xi, \qquad (A)$$

$$w_{n+1} = \int_0^t d\tau \int_0^\infty d\eta \int_a^b \sum_{m=0}^{n} \left(u_{n-m} v_m - w_m \int_0^\eta v_{n-m} d\eta + \frac{\sigma B_0^2}{\rho} u_m \right) \frac{\partial G}{\partial y} e^{-(x-\xi)^2/z} \frac{d\xi}{\sqrt{\pi z}},$$

$$h_{n+1} = \int_0^t d\tau \int_0^\infty d\eta \int_a^b \sum_{m=0}^{n} \left(u_{n-m} \varphi_m - \psi_m \int_0^\eta v_{n-m} d\eta \right) G e^{-(x-\xi)^2/z} \frac{d\xi}{\sqrt{\pi z}},$$

$$\varphi_{n+1} = \int_0^t d\tau \int_0^\infty d\eta \int_a^b \sum_{m=0}^{n} \left(u_{n-m} \varphi_m - \psi_m \int_0^\eta v_{n-m} d\eta \right) G e^{-(x-\xi)^2/z} \frac{2(\xi - x)}{\sqrt{\pi z^3}} d\xi,$$

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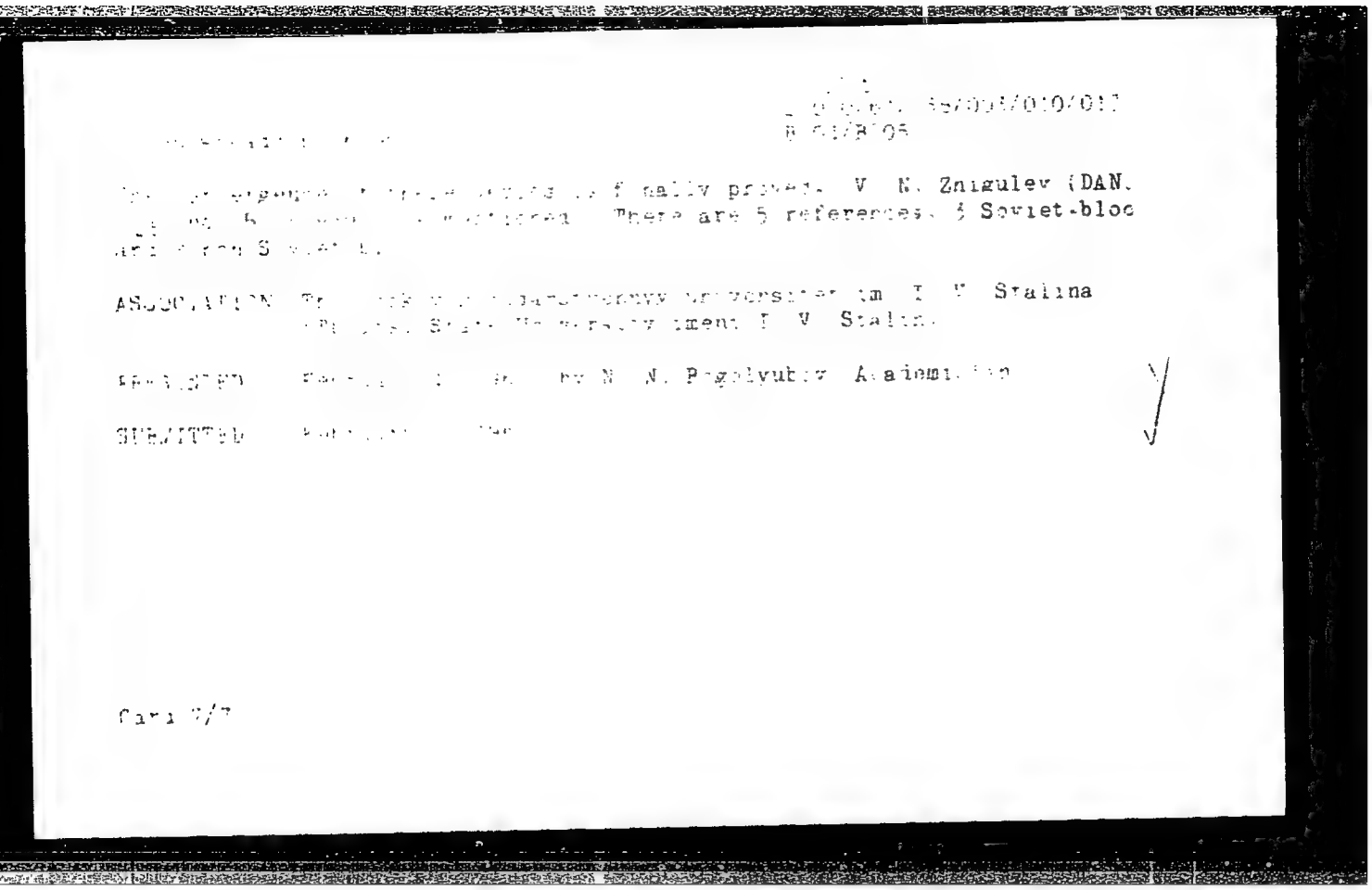
$$\psi_{n+1} = \int_0^t d\tau \int_0^\infty d\eta \int_a^b \sum_{m=0}^{n} \left(u_{n-m} \varphi_m - \psi_m \int_0^\eta v_{n-m} d\eta \right) \frac{\partial G}{\partial y} e^{-(x-\xi)^2/z} \frac{d\xi}{\sqrt{\pi z}}.$$



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S/020/61/138/004/007/023
B104/B203

AUTHOR: Sharikadze, D. V.

TITLE: Motion of a medium of finite conductivity in the presence of a plane magnetic field

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 4, 1961, 817-819

TEXT: The author studies magnetic fields in which (1) unsteady flows of compressible conducting media, (2) steady flows of compressible conducting media, (3) unsteady flows of viscous incompressible conducting media, and (4) unsteady flows of viscous compressible conducting media are possible. For the case where the flow of a medium of the density $\rho = \rho(x,y,t)$ proceeds along the x-axis at the velocity $v_x = u(y,t)$, $v_y = v_z = 0$, and in the presence of an indefinite plane magnetic field with the components $H_x(x,y,t)$, $H_y(x,y,t)$, the equations of magnetohydrodynamics are:

$$\frac{\partial h_x}{\partial x} + \frac{\partial h_y}{\partial y} = 0; \quad (1)$$

$$\frac{\partial \rho}{\partial t} + u\frac{\partial \rho}{\partial x} = 0; \quad (2)$$

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$$\frac{\partial h_x}{\partial t} + u\frac{\partial h_x}{\partial x} = h_y\frac{\partial u}{\partial y} + \lambda\Delta h_x; \quad (3)$$

$$\frac{\partial h_y}{\partial t} + u\frac{\partial h}{\partial x} = \lambda\Delta h_x; \quad (4)$$

$$\rho\frac{\partial u}{\partial t} = -\frac{\partial p'}{\partial x} + \left(h_x\frac{\partial h_x}{\partial x} + h_y\frac{\partial h_x}{\partial y}\right) + \eta\frac{\partial^2 u}{\partial y^2}; \quad (5)$$

$$\frac{\partial p'}{\partial y} = \left(h_x\frac{\partial h_y}{\partial x} + h_y\frac{\partial h_y}{\partial y}\right). \quad (6)$$

where $p' = p + h^2/2$ is the total pressure of the medium, $\lambda = c^2/4\pi\sigma$ the magnetic viscosity, and $\vec{h} = \vec{H}/\sqrt{4\pi}$. With introduction of the vector potential $\vec{A}$ and substitution of $\partial A/\partial y = h_x$, $-\partial A/\partial x = h_y$, the author obtains with the aid of simple transformations: $\partial\rho/\partial t + u\partial\rho/\partial x = 0$ (7)

$$\frac{\partial A}{\partial t} + u\frac{\partial A}{\partial x} = \lambda\Delta A + E(t); \quad (8)$$

$$\frac{\partial}{\partial y}\left(\rho\frac{\partial u}{\partial t}\right) = \frac{D(\Delta A, A)}{D(x, y)} + \eta\frac{\partial^2 u}{\partial y^2}, \quad (9)$$

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Here, E(t) is proportional to the z-component of the electric field vector, and, in the general case, different from zero. In the following, E(t) is assumed to be known. $D(\Delta A, A)/D(x,y)$ is the Jacobian. For the first case, the author obtains, for the determination of A, the two equations

$$\frac{\partial^2}{\partial x^2}\frac{D(\Delta A, A)}{D(x,y)} = 0, \quad \frac{\partial}{\partial x}\left(\frac{\lambda\Delta A - \partial A/\partial t + E(t)}{\partial A/\partial x}\right) = 0,$$

where $A = -x\varphi(y,t) + f(y,t)$ (11). For determining u, φ, and f, he obtains the system

$$\lambda\alpha\frac{\partial^2 u}{\partial y\,\partial t} = \frac{\partial^3\varphi}{\partial y^3}\frac{\partial\varphi}{\partial y} - \varphi\frac{\partial^3\varphi}{\partial y^3}; \tag{12}$$

$$\frac{\partial\varphi}{\partial t} - \lambda\frac{\partial^2\varphi}{\partial y^2} = 0; \tag{13}$$

$$\frac{\partial f}{\partial t} - \lambda\frac{\partial^2 f}{\partial y^2} = u\varphi + E(t). \tag{14}$$

For the second case, he obtains the relations $A = x\varphi(y) + f(y)$ and the system $\varphi = ay + b$, $f = cy^2/2 + my + n$ and $u = (\lambda c + E)/(ay + b)$, where a,b,c,m,n are constants. For the third case, he obtains, for A and φ, the expressions

$A = -x\rho(y) + f(y,t)$, $\psi = ay + b$, where f and u satisfy the equations

$$\lambda \frac{\partial^2 f}{\partial y^2} - \frac{\partial f}{\partial t} = -(ay+b)u - E(t); \qquad (17)$$

and

$$\nu \frac{\partial^2 u}{\partial y^2} - \frac{\partial u}{\partial t} = (ay+b)\frac{\partial^2 f}{\partial y^2} - a\frac{\partial f}{\partial y} - B(t). \qquad (18)$$

For the fourth case, he obtains the system

$$A = -x\varphi(y,t) + f(y,t),$$

$$\frac{\partial \varphi}{\partial t} - \lambda \frac{\partial^2 \varphi}{\partial y^2} = 0,$$

$$\frac{\partial f}{\partial t} - \lambda \frac{\partial^2 f}{\partial y^2} = u\varphi + E(t),$$

$$\frac{\partial}{\partial y}\left(\frac{\partial u}{\partial t} - \frac{\eta}{\lambda\alpha}\frac{\partial^2 u}{\partial y^2}\right) = \frac{1}{\lambda\alpha}\left(\frac{\partial^2 \varphi}{\partial y^2}\frac{\partial \varphi}{\partial y} - \varphi\frac{\partial^3 \varphi}{\partial y^3}\right).$$

The solution of the unsteady problems leads to integral equations which can be calculated by successive approximation. There are 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc.

ASSOCIATION: Tbilisskiy gosudarstvennyy universitet im. I. V. Stalina (Tbilisi State University imeni I. V. Stalin)

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Motion of a medium of finite conductivity... B104/B203

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S/040/62/026/005/015/016
D234/D308

AUTHOR: Sharikadze, D. V. (Tbilisi)

TITLE: A nonstationary problem of flow of a viscous incompressible liquid

PERIODICAL: Prikladnaya matematika i mekhanika, v. 26, no. 5, 1962, 966-969

TEXT: The author considers the flow of liquid between two infinite discs at a distance h_0 from each other, one rotating with an angular velocity $\omega_1(t)$, and the other with $\omega_2(t)$. Liquid is blown in from the first disc with a velocity $v_1(t)$ and from the second one with $v_2(t)$. The author quotes the differential equations of the problem (G. A. Tirskiy, DAN SSSR, v. 119, 1958, no. 2)

$$\frac{\partial^2}{\partial y^2}\left(\frac{\partial^2 w}{\partial y^2} - \frac{\partial w}{\partial t}\right) = w\frac{\partial^3 w}{\partial y^3} + 4v\frac{\partial v}{\partial y} \qquad (1)$$

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$$\frac{\partial^2 v}{\partial y^2} - \frac{\partial v}{\partial t} = w \frac{\partial v}{\partial y} - v \frac{\partial w}{\partial y}, \quad 2u + \frac{\partial w}{\partial y} = 0 \qquad (2)$$

and reduces them to integro-differential equations. The functions w and v are looked for in the series form

$$\frac{\partial^n w}{\partial y^n} = \sum_{k=0}^{\infty} \delta^k \frac{\partial^n w_k}{\partial y^n}, \quad \frac{\partial^0 w}{\partial y^0} = w \quad (n = 0, 1, 3) \qquad (25)$$

$$\frac{\partial^m v}{\partial y^m} = \sum_{k=0}^{\infty} \delta^k \frac{\partial^m v_k}{\partial y^m}, \quad \frac{\partial^0 v}{\partial y^0} = v \quad (m = 0, 1) \qquad (26)$$

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and the recurrence formulas for the terms are found to be

$$\frac{\partial^n w_0}{\partial y^n} = \frac{\partial^n F}{\partial y^n}, \quad \frac{\partial^m v_0}{\partial y^m} = \frac{\partial^m A}{\partial y^m} \tag{27}$$

$$\frac{\partial^n w_{k+1}}{\partial y^n} = \int_0^t d\tau \int_0^h \sum_{\alpha=0}^{k} \left(w_\alpha \frac{\partial^3 w_{k-\alpha}}{\partial \eta^3} + 4 v_\alpha \frac{\partial v_{k-\alpha}}{\partial \eta} \right) \frac{\partial^{nG}}{\partial y^n} \partial \eta \tag{28}$$

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$$\frac{\partial^m v_{k+1}}{\partial y^m} = \int_0^t d\tau \int_0^h \sum_{\alpha=0}^{k} \left(w_\alpha \frac{\partial v_{k-\alpha}}{\partial \eta} - v_\alpha \frac{\partial w_{k-\alpha}}{\partial \eta} \right) \frac{\partial^{mG}}{\partial y^m} \partial \eta \qquad (29)$$

The convergence of (25) is proved and formulas are given for the pressure and resistance moments of discs with finite radii.

SUBMITTED: February 3, 1961

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SHARIKADZE, D. V. (Tbilisi)

"Viscous incompressible conductive fluid flow in porous tubes of rectangular cross section".

report presented at the 2nd All- Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964.

ACC NR: AP6031947 SOURCE CODE: UR/0251/66/043/003/0551/0554

AUTHOR: Sharikadze, D. V.

ORG: Tbilisi State University (Tbilisskiy Gosudarstvennyy universitet)

TITLE: Approximation solution of some stationary boundary-layer problems with the magnetic field taken into account

SOURCE: AN GruzSSR. Soobshcheniya, v. 43, no. 3, 1966, 551-554

TOPIC TAGS: magnetohydrodynamics, boundary layer problem, hydrodynamics, equation solution, successive approximation, EXTERNAL MAGNETIC FIELD

ABSTRACT: A combination of the boundary layer method and the method of successive approximations is used in the approximate solution of some stationary boundary-layer problems in the case when the magnetic field is taken into account. The flow past the plane plate is considered as the first problem. It is assumed that a plane plate moving with a constant velocity in a viscous, incompressible, electrically conducting fluid is acted upon by a constant external magnetic field perpendicular to the plane of the plate and that the magnetic field induced in the fluid is small as compared with the external magnetic field. For the boundary layer of the defined problem, the magnetohydrodynamics, equations, are written and boundary conditions are established. By introducing the dimensionless coordinated and the "finite thickness" of the boundary layer $\delta(x)$, and eliminating the vertical velocity component v with the aid of the continuity equation, the integro-differential equation

Card 1/2

SHARIKADZE, S.Ye.

Studying the history of mastering new techniques under the second five-year plan in Georgia. Soob. AN Gruz. SSR 20 no. 4:507-512 Ap '58. (MIRA 11:7)

1. Institut istorii im. akademika I.A. Dzhavakhishvili AN GruzSSR, Tbilisi. Predstavleno akademikom A.T. Bochorishvili.
(Georgia--Technical education)

1. SHARIKOV, A. YE., SLUTSKIY, A. I., VLADIMIROV, O. K.

2. USSR (600)

4. Ore Deposits - Murmansk Province

7. Report on the activity of the Monchegorsk geophysics party of 1944. (Abstract.) Izv.Glav.upr.geol.fon. no. 3, 1947

9. Monthly List of Russian Accessions. Library of Congress. March 1953. Unclassified.

SHARIKOV, A.Ye.

Geophysical prospecting for copper and nickel sulfide ores in the Soviet Union. Izv. Kar. i Kol'. fil. AN SSSR no.2:75-84 '58. (MIRA 11:9)

1.Geologicheskiy institut Kol'skogo filiala AN SSSR.
(Copper ores) (Nickel ores) (Prospecting--Geophysical methods)

POSTNIKOV, Aleksandr Konstantinovich; STEPANOV, Anatoliy Alekseyevich; PIMENOV, Ivan Ivanovich; SHARIKOV, I.M., retsenzent; SEGAL', N.M., redaktor; MEDVEDEVA, L.A., tekhnicheskiy redaktor

[OPL-2 wringing and rinsing machine for retted flax] Otzhimno-promyvnaia mashina OPL-2 dlia l'nianoi tresty. Moskva, Gos.nauchno-tekhn.izd-vo M-va legkoi promyshl. SSSR, 1957. 33 p. (MLRA 10:9)
(Flax)

CHAMCHIN, Vasiliy Timofeyevich; ANTIPOV, Andrey Vasil'yevich [deceased]; LOBANOV, Viktor Ivanovich; [redacted] retsenzent; GUSEVA, Ye.M., redaktor; MEDVEDEV, L.Ya., tekhnicheskiy redaktor

[Installing and servicing scutching and hackling devices in flax and hemp mills] Ustroistvo i obsluzhivanie mial'no-trepal'nykh i kudelaprigotovitel'nykh agregatov l'nozavodov i pen'kozavodov. Moskva, Gos.nauchno-tekhn.izd-vo M-va legkoi promyshl. SSSR, 1957. 319 p. (MLRA 10:10)

(Flax) (Textile machinery)

SHARIFOV, K.A.; [illegible], S.M.; [illegible], N.Yu.

Enthalpy of the formation of gallium antimonide. Izv. AN Azerb. SSR. Ser. fiz.-tekh. i mat. nauk no.4:85-87 '64. (MIRA 17:19)

SHARIKOV, K. YE.

Sharikov, K. Ye. - "Anatomical morphological investigation of the potato root", Belorus. zoovet. (Belorus. roq. an-t), Issue 7, 1947, p. 45-[illegible], - Bibliogr: 33 items.

SO: U-3261, 15 April 53, (Letopis 'Zhurnal 'nykh Statey, No. 11, 1949).

SHARIKOV, K.Ye., kandidat biologicheskikh nauk.

Method of determining the susceptibility of soil to infestation by potato wart (Synchytrium endobioticum Perc.). Sbor. nauch.trud.Inst. biol. AN BSSR no.1:147-154 '50. (MLRA 9:1)
(Soil micro-organisms) (Potato wart)

DOROZHKIN, N. A.; SHARIKOV, K.Ye., kandidat biologicheskikh nauk.

Biology of the potato wart disease and methods of combating it.
Sbor.nauch.trud.Inst.biol.AN BSSR no.2 : 3-12 '51. (MLRA 9:1)

1.Chlen-korrespondent AN BSSR.

(Potato wart)

SHARIKOV, K. E.

SHARIKOV, K. E. "Method of Distinguishing (Plasmolysis) the Live and Dead Sporangia of the Potato Wart Orgenism (Synchytrium endobioticum)," Sad i Ogorod, no. 12, 1951, pp. 57-60. 80 Sa13

SOURCE: IRA SI 90-53, 15 Dec. 1953

SHARIKOV, K. E.

Review of Applied Mycology
Vol. 33 Mar. 1954

(1)

Sharikov (K. E.). Пораженне Картофеля раком при разной концентрации зооспорангиев в почве. [Infection of Potato with wart by different concentrations of zoosporangia in the soil.]—Сад и Огород [*Orchard & Garden*], *1953*, 8, pp. 60-61, 1953.

In studies in the U.S.S.R. on the development of potato varieties resistant to wart [*Synchytrium endobioticum*: *R.A.M.*, 32, p. 448 and following abstracts] experiments were carried out in 1950–1 to determine the level of soil infestation at which susceptible varieties become completely infected with wart. Using a range of zoosporangial concentrations it was found that even 25 zoosporangia per gm. of soil were able to infect 60 per cent. of the plants while one sporangium in 10 gm. soil infected single plants. These results indicate that even insignificant soil infestations can serve as infection sources.

SHARIKOV, K.Ye., kand.biolog.nauk (g.Misk); REMNEVA, Z.I., kand.sel'skokhoz.nauk, (g.Misk)

Vaccination of potatoes against potato wart. Zashch. rast. ot. vred. i bol. 5 no. 8:48-49 Ag '60. (MIRA 13:12)
(Potato wart)

[illegible], [illegible] M.M.; YUNUSOV, S.Yu.

Alkaloids of Petilium Eduardi. Khim. prirod. soed. no.6: 384-392 '65. (MIRA 19:1)

1. Institut khimii rastitel'nykh veshchestv AN UzSSR. Submitted [illegible], 1965.

SHARIKOV, V.A.

Current indicator for track circuits. Avtom., telem. i sviaz' 2 no.5:35 My '58. (MIRA 11:5)

1.Glavnyy konstruktor otdela konstruktorskogo byuro Glavnogo upravleniya signalizatsii i svyazi.
(Railroads--Electric equipment)

SEMENYUK, N.M.; RYAZANTSEV, B.S.; TREKHDENOV, V.I.; SHARIKOV, V.A.

Leader of an inventive team. Avtom. telem. i sviaz' 2 no.12:41 D '58. (MIRA 11:12)

(Mashkov, Konstantin Dmitrievich, 1898-)

BRYLEYEV, Arkadiy Mikhaylovich, doktor tekhn. nauk, prof.; PENKIN, Nikolay Fedorovich, kand. tekhn. nauk; PUGIN, Daniil Kalistratovich, kand. tekhn. nauk; SHARIKOV, Vladimir Alekseyevich, inzh. Prinimal uchastiye DMITRENKO, I.Ye., inzh.; SHIROKSHIN, K.A., inzh., retsenzent; MARENKOVA, G.I., inzh., red.; NOVIKAS, M.N., inzh., red. USENKO, L.A., tekhn. red.

[Transistorized and magnetic noncontact devices of centralized traffic control systems] Poluprovodnikovye i magnitnye beskontaktnye pribory v ustroistvakh STsB. [By] A.M.Bryleev i dr. Moskva, Transzheldorizdat, 1962. 230 p. (MIRA 15:5)
(Railroads--Electronic equipment)
(Railroads--Signaling--Centralized traffic control)

SHARIKOV, V.A.

Superimposition of audio frequency on rail networks. Avtom., telem. i sviaz' 6 no.3:9-12 Mr '62. (MIRA 15:3)

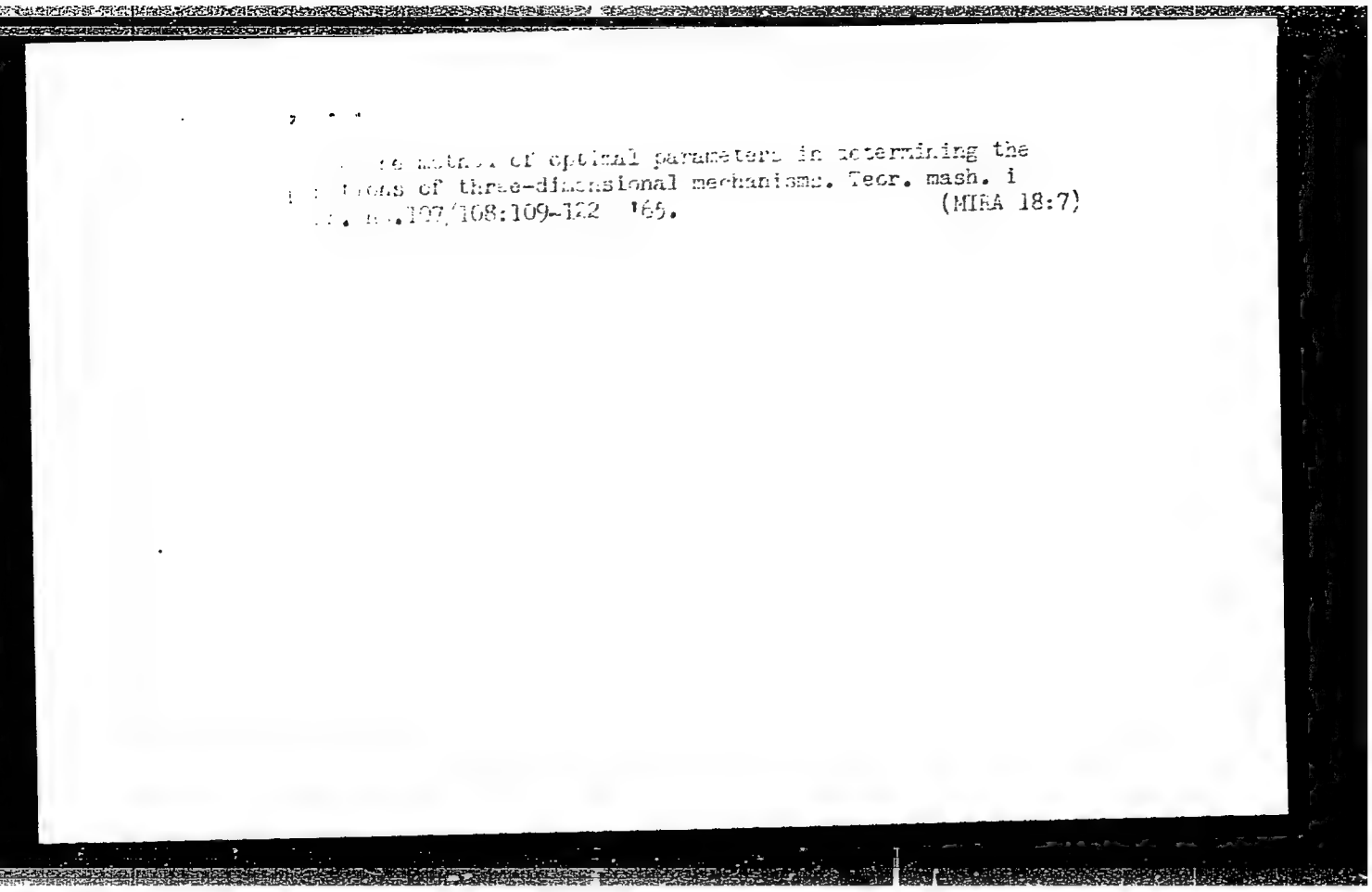
1. Nachal'nik otdela avtomatiki telemekhaniki Konstruktorskogo byuro Glavnogo upravleniya signalizatsii i svyazi Ministerstva putey soobshcheniya.

(Railroads--Signaling)

SHARIPOV, V.I.

Theory of screws in the structural and kinematic analysis of pairs and mechanisms. Trudy Inst.mash.Sem.po teor.mash. 22 no.85/86: 108-136 '61. (MIRA 14:12)

(Screws--Theory of)



. . . . matrix of optimal parameters in determining the
. . . . ions of three-dimensional mechanisms. Teor. mash. i
. . . . 107/108:109-122 '65. (MIRA 18:7)

[illegible]

AUTHOR: [illegible]ev, V.I.

TITLE: Theory of [illegible] in the structural and kinematic analysis of pairs and mechanisms

SOURCE: Akademiya nauk SSSR. Institut mashinovedeniya. Trudy. Seminar po teorii mashin i mekhanizmov. v. 21, no. [illegible], Moscow, 1961, [illegible]

TEXT: The author describes the applications (as stated in the title) of methods developed by him in a previous paper. ([illegible] kinematicheskom analize par i mekhanizmov [illegible], Seminar [illegible], v. 22, no. [illegible], 1960) [illegible] classification of existing kinematic pairs is given and [illegible]. The methods offered disclose the [illegible] of three-dimensional mechanisms and have allowed some unknown simple mechanisms to be found which could be utilized in [illegible]

Card 1/2

SHARIKOV, V.I.

Industrial testing of the BOS boring machine. Trudy TSNIIPodzemshakhstroia no.2:93-97 '63. (MIRA 17:5)

SHARIKOV, V.I.

Theory of screws in the statics of pairs, mechanisms and trusses and in the kinetostatics of mechanisms. Teor. mash. i mekh. no.101/102:20-29 '64.

(MIRA 17:11)

ACC NR: AP6021460 SOURCE CODE: UR/0413/66/000/011/0080/0080

INVENTOR: Drozdov, A. A.; Bereza, G. V.; Kochepasov, A. P.; Maksimok, N. V.; Sharikov, V. V.

ORG: None

TITLE: A device for centralized control of the amplitude of seismic signals in seismic stations. Class 42, No. 182353 [announced by the All-Union Scientific Research Institute of Geophysical Exploration Methods (Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki)]

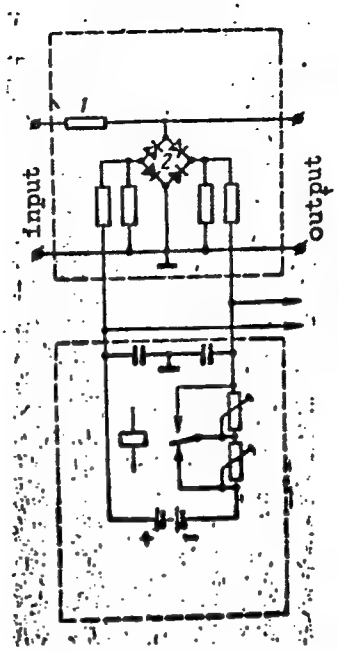
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 80

TOPIC TAGS: nonelectric signal equipment, seismology

ABSTRACT: This Author's Certificate introduces a device for centralized control of the amplitude of seismic signals in seismic stations. The installation contains a mechanical stepper switch. Reliability is improved by installing a voltage divider at the input of each channel of the seismic station. One arm of this divider is a resistor connected in series with the signal circuit, while the other is a bridge type diode switch connected in parallel with the signal circuit.

Card 1/2 UDC: 550.340.19

ACC NR: AP6021460



1--resistor
2--diode switch

SUB CODE: 08, 09/ SUBM DATE: 13May65

Card 2/2

SHARIKOV, Ye.N., inzhener, redaktor.

[Complex operational planning and control in railroad work; method of P.D. Sudnikov, dispatcher on the Minsk Division of the Minsk Railroad] Kompleksnoe operativnoe planirovanie i regulirovanie poezdnoi raboty; metod dezhurnogo po Minskomu otdeleniiu Minskoi dorogi P.D.Sudnikova. Moskva, Gos.transp. zhel-dor.izd-vo, 1953. 131 p. (MLRA 6:9)
(Railroads--Traffic)

TSIRLIN, Boris Khatskelevich; MIL'DVARF, M.D., inzh., retsenzent; SHARIKOV, Ye.N., inzh., retsenzent; PREDE, V.Yu., inzh., red.; VOROTNIKOVA, L.F., tekhn. red.

[Experiment in increasing the traffic capacity; from practices of the Stalinogorsk Division of the Moscow Railroad] Opyt usileniia propusknoi sposobnosti; iz praktiki Stalinogorskogo otdeleniia Moskovskoi dorogi. Moskva, Vses.izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 19 p. (MIRA 15:1)

(Railroads—Management)

IDANOVICH, V.G.; SHARIKOV, Yu.D.

Plotting a general profile of an ocean wave by means of aerial photographs. Trudy Lab. aeromet. 4:112-118 '55.
(Waves) (Photography, Aerial)

14-57-6-12366D

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6, p 92, (USSR)

AUTHOR: Sharikov, Yu. D.

TITLE: Studying Sea Waves From Aerial Photographs (Izucheniye morskogo volneniya po aerofotosnimkam)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to Vysh. inzh. mor. uch-shche (Higher Marine Engineering College), Leningrad, 1956

ASSOCIATION: Vysh. inzh. mor. uch-shche (Higher Marine Engineering College)

Card 1/1

LYALIKOV, K.S.; SHARIKOV, Yu.D.

Study of the diffraction method for analyzing aerial photograps of turbulent ocean surface. Trudy Lab.aeromet. 5:72-82 '56. (MLRA 10:1)
(Ocean) (Photography, Aerial)

LYALIKOV, K.S. professor; SHARIKOV, Yu.D

Using diffraction method in analyzing aerial photographs. Priroda 46 no.2:79-81 F '57. (MLRA 10:3)

1. Laboratoiya aerometodov Akademii nauk SSSR, Leningrad.
(Diffraction) (Photographic interpretation)

LYALIKOV, K.S., professor; SHARIKOV, Yu.D.

Deciphering aerial photography of the sea swell. Priroda 46 no.4:79-80 Ap '57. (MLRA 10:5)

1. Laboratoriya aerometodov Akademii nauk SSSR (Leningrad).
(Photographic interpretation) (Photography, Aerial) (Waves)

3(4) PHASE I BOOK EXPLOITATION SOV/1835

Akademiya nauk SSSR. Laboratoriya aerometodov

Trudy, t. 6 (Transactions of the Laboratory of Aerial Methods, USSR Academy of Sciences, Vol 6) Moscow, Izd-vo AN SSSR, 1958. 280 p. Errata slip inserted. 1,500 copies printed.

Resp. Ed.: V.P. Miroshnichenko, Candidate of Geological and Mineralogical Sciences; Ed. of publishing House: D.M. Kudritskiy; Tech. Ed.: E.Yu. Blaykh.

PURPOSE: This volume is intended for geologists, photo interpreters, or other personnel engaged in the study of landscape formations, especially from the standpoint of aerial photography.

COVERAGE: This collection of studies and brief articles treats problems in aerial photography and photo interpretation in relation to geological phenomena. The geographical area of study, with minor exceptions, is the Caspian plains and western shore. Most of the studies are well illustrated with aerial photographs. Aside from the numerous articles on geological phenomena of the Caspian basin, the following are also covered: portions of the Russian platform, the Muyunkumy sands of Central Kazakhstan, photo interpretation of clayey flats, desert vegetation and tree cover, the effective lens speed of photographic objectives, photogrammetric determination of profiles on hydro technical models, and others. No personalities are mentioned. References follow each main article.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

Card 6/6 MM/ad 6-25-59

26-58-4-20/45

AUTHORS: Sharikov, Yu.D., and Cherkasov, I.A.

TITLE: Aerial Photography for Investigating Sea Waves (Aerofoto s"yemka v izuchenii morskikh volneniy)

PERIODICAL: Priroda, 1958, Nr 4, pp 83-85 (USSR)

ABSTRACT: Aerial photos of the sea enable the determining of the geometrical elements of the individual wave and of the swells. Experiments for the development of a dependable method were conducted by the Laboratory of Aeromethods of the AS USSR in 1956. This method determines all the details of a wave: its shape, height and static distribution of surfaces with the various angles of inclination. The photographs are taken from two separate aircraft. Both aerial cameras are controlled from one plane by means of a radio device which regulates the correct exposure. The distance between the two planes is controlled by an optical aiming device. To ensure uninterrupted photographing, both cameras are installed in the fuselages where they can be immediately reloaded. The processing of the pictures is performed in the same way as for cartographic purposes. The camera used was an AFA-37 with a focal distance of 70 mm. Figure 1 shows a picture

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548610019-6"

Aerial Photography for Investigating Sea Waves 26-58-4-20/45

of a swell, Figure 2 the contours, and Figure 3 the profiles of the photographed waves.
There is 1 photo and 2 charts.

ASSOCIATION: Laboratoriya aerometodov Akademii nauk SSSR - Leningrad (Laboratory of Aeromethods of the USSR Academy of Sciences - Leningrad)

AVAILABLE: Library of Congress

Card 2/2 1. Ocean waves-Photographic analysis 2. Aerial photography-Applications 3. Aerial photography-Equipment

SHARIKOV, YU.D.

Transactions of the Laboratory (~~Coml.~~) of Aeromethods, AS USSR SOV/3815
V.7, Materials of 7th AU Interdept Conf. Aerial Survey (Dec 56), Moscow, 1959, 331pp.

Card 7/15

3(4) SOV/154-59-2-12/22

AUTHORS: Mazov, M. V., Aksenov, D. S., Cherkasov, I. A., Sharikov, Yu. D.

TITLE: Device for Taking Synchronized Stereo-photographs From Two Airplanes (Apparatura dlya sinkhronnoy stereofotos"yemki s dvukh samoletov)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"yemka, 1959, Nr 2, pp 77-86 (USSR)

ABSTRACT: In 1956, devices for taking synchronized aerial photographs were developed at the Laboratoriya aerometodov AN SSSR (Laboratory for Aerial Methods of the AS USSR). The fundamental condition is a high degree of synchronization. This synchronization can only be achieved with the help of a radio device, which the authors call a radio synchronizer. The essence of the functioning of the device lies in the fact that the impulses for the operation of the shutters of both aerial cameras are given at such an interval, that both shutters open at the same time, because even with aerial cameras of the same type the response time varies. The first model of a radio synchronizer was produced in 1956. A second model followed in 1957. Both designs are described here. Both had various deficiencies which were rectified

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Device for Taking Synchronized Stereo-photographs From Two Airplanes

with the third model. The device consists of a transmitting and a receiving set, installed in two airplanes. The principal wiring diagram is shown in figure 7 and the block wiring diagram in figure 6. The functioning of the radio synchronizer is described in detail. The dimensions of the transmitter are 250 × 300 × 150 mm and those of the receiver 300 × 500 × 250 mm. The weight of each device including the converter is 12 kg. A test proved that a reliable synchronization of 1/200 seconds is secured and that the receiving device is not subject to any interference at all. The device permits the control and adjustment of the synchronization whilst taking stereo-photographs. There are 10 figures.

ASSOCIATION: Laboratoriya aerometodov AN SSSR (Laboratory for Aerial Methods of the AS USSR)

SHARIKOV, Yu.D.

Aerial photogrammetry in the study of sea waves. Trudy Lab. aerometod. 7:172-175 '59. (MIRA 13:1)

1. Laboratoriya aerometodov AN SSSR.
(Aerial photogrammetry) (Waves)

SHARIKOV, Yu.D.

The three-dimensional characteristics of sea waves. Trudy Okean kom. 9:133-136 '60. (MIRA 14:1)
(Waves)

S[illegible]NIKOV, Yu.D.; CHEMKASOV, I.A.

Use of aerial photographic surveying in studying surface currents of the sea. Meteor. i gidrol. no.3:46-48 Mr '61. (MIRA 14:2)
(Ocean currents) (Aerial photogrammetry)

SHARIKOV, Yu.D.

Use of fluorescein in determining the direction of surface currents in the sea. Meteor.i gidrol. no.6:51-52 Je '61. (MIRA 14:5)
(Ocean currents) (Fluorescein)

ZDANOVICH, V.G., doktor tekhh. nauk, prof.; RAMM, N.S., kand. tekhn. nauk, st. nauchnyy sotr.; SHARIKOV, Yu.D., kand. tekhn. nauk, st. nauchnyy sotr.; YANUTSH, D.A., kand. tekhn. nauk, st. nauchnyy sotr.; CHERKASOV, I.A., kand. tekhn.nauk; ALEKSEYEV-SHEMYAKIN, V.P., nauchnyy sotr.; KOL'TSOV, V.V., nauchnyy sotr.; KOSHECHKIN, B.I., nauchnyy sotr.; SEMENCHENKO, I.V., nauchnyy sotr.; UGLEV, Yu.V., nauchnyy sotr.; KUZINA, A.M., starshiy laborant; KUDRITSKIY, D.M., kand. tekhn. nauk, dots., retsenzent; VEYNBERG, V.B., doktor tekhn. nauk, retsenzent; LOSHCHILOV, V.S., kand.geogr. nauk, retsenzent; REKHTZAMER, G.R., kand. tekhn.nauk, dots., retsenzent; KOZLYANINOV, M.V., kand. geogr. nauk, retsenzent; BUSHUYEV, A.V., inzh., retsenzent; ZAMARAYEVA, R.A., tekhn. red.

[Use of airborne methods to study the sea] Primenenie aerometodov dlia issledovaniia moria. Pod obshchei red. V.G.Zdanovicha. Moskva, Izd-vo Akad. nauk SSSR, 1963. 546 p. (MIRA 16:4)

1. Akademiya nauk SSSR. Laboratoriya aerometodov. 2. Laboratoriya aerometodov Akademii nauk SSSR (for Zdanovich, Ramm, Sharikov, Yanutsh, Cherkasov, Alekseyev-Shemyakin, Kol'tsov, Koshechkin, Semenchenko, Uglev, Kuzina).
(Aeronautics in oceanography) (Aerial photogrammetry)

L 1584-66 EWT(1)/T/EED(b)-3 IJP(c) GW
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Akademiya Nauk SSSR. Laboratoriya aerometodov gosudarstvennogo geologicheskogo komiteta SSSR

44,55

Methods of studying ocean currents from an airplane (Metody izucheniya morskikh techeniy s samoleta) Moscow, Izd-vo "Nauka", 1964. 227 p. illus., biblio., append. Errata slip inserted. 1100 copies printed. Managing editor: Doctor of Technical Sciences V. G. Zdanovich; Editor of the publishing house: Ye. A. Semenova; Technical editor: G. P. Aref'yeva; Proofreaders: A. A. Ginsburg, G. A. Miroshnichenko, A. Kh. Saltanayeva

44,55

TOPIC TAGS: photogrammetry, oceanography, aerial photography, ocean current

44,12 55,12 20,44,55

PURPOSE AND COVERAGE: This book was intended for specialists in the fields of photogrammetry and oceanography concerned with studying oceanic currents by means of aerial photography. The theory and the practice of basic aerial methods of measuring ocean currents are presented (method of single floats and the method of bottom indicators), and the problems of producing the associated aerial observations are analyzed. For each method, its theoretical foundations are outlined, the equipment required is described, the procedures involved in flight photography

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and development of the aerial photographs are analyzed, and the accuracy of the results is evaluated. The book is based on work carried out by the Laboratoriya Aerometodov of the GGK SSSR in recent years. The work was done by Laboratoriya personnel, including Professor V. G. Zdanovich, Senior Scientific Colleague Candidate of Technical Sciences Yu. D. Sharikov, and Junior Scientific Colleagues A. L. Babkov and O. A. Yurkovskiy. Candidate of Technical Sciences G. R. Rekhtsamer, Docent at the Leningradskiy Gidrometeorologicheskiy Institut, also participated in the work.

TABLE OF CONTENTS:

SUB CODE: ES SUBMITTED: 25Nov64 NR REF SOV: 080

OTHER: 019

Card 2/2 dg

L 31136-66 EWT(1) GW
ACC NR: AT6012783 SOURCE CODE: UR/2561/65/000/021/0081/0088

AUTHOR: Zdanovich, V. G.; Sharikov, Yu. D.

ORG: none

TITLE: Some problems in determining the drift of ice from aerial photographs

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'sky institut. Problemy Arktiki i Antarktiki, no. 21, 1965, 81-88

TOPIC TAGS: photogrammetry, aerial survey, oceanography, ice drift, photo interpretation

ABSTRACT: An improved method is presented for the determination of the drift of ice from aerial photographs. The procedures are primarily those developed by the authors while developing techniques for measuring ocean currents from airplanes. Since the surfaces of ice floes are assumed to be horizontal and flat, it is possible to simplify methods of preparing photomaps and photomosaics and to compile only segments of ice strips. Aerial photonegatives are used (instead of contact prints) in conjunction with transparent vellum on which the individual sections of drift ice and the control are plotted. The

Card 1/2 UDC: 551.326.022

L 31136-66
ACC NR: AT6012783

mosaic is carried out directly using configurations of points symmetrically located with reference to the center of the photos and approximately in the direction of the flight line (instead of relative to the photo base). Control requirements are for two main control points and one photo pass point to be located in the overlaps of each photo pair. The investigations showed that with long strips, it was better (more accurate) to use phototriangulation instead of the proposed method and that the use of trilateration in conjunction with the proposed method would permit lengthening a strip 1.5 times more than is possible with the double photography method. Orig. art. has: 12 formulas and 5 figures. [ER]

SUB CODE: 08/ SUBM DATE: 26Nov63/ ORIG REF: 007/ ATD PRESS: 4240

Card 2/2

L 27117-66 EWT(1) GW

ACC NR: AP6014288 (N) SOURCE CODE: UR/0213/66/006/002/0360/0366

AUTHOR: Zdanovich, V. G.; Sharikov, Yu. D. 39 B

ORG: Laboratory of Aerial methods, Leningrad (Laboratoriya aerometodov)

TITLE: Determination of ocean-wave heights based on single oblique aerial photographs

SOURCE: Okeanologiya, v. 6, no. 2, 1966, 360-366

TOPIC TAGS: oceanography, ocean property, aerial photograph, oblique photography

ABSTRACT: A method for determining wave parameters, based on single oblique photographs of the surface of the sea taken from an aircraft, has been suggested by Korshunov (Yu. S. Korshunov, 1963, Perspektivnaya s"yemka volneniya odnim aerofotos"yemochnym apparatom s samoleta, Tr. Morsk. gidrofiz. in-ta XXVIII Fizika moryk, Izd. AN USSR, Kiev). Errors resulting from this method were analyzed. It was shown that the error in determining wave heights may be considerable while that for wave lengths was rather small. However, the use of oblique photographs of waves for determining length does not make sense because wave length can be determined even more accurately from vertical aerial photographs. Orig. art. has: 3 figures, 20 formulas, and 1 table. [Based on authors' abstract.] [NT]

SUB CODE: 08, 14/ SUBM DATE: 21Dec64/ ORIG REF: 004/ OTH REF: 001

UDC: 528.77:551.46.026

Card 1/1

L 05084-67 EWT(1) GW
ACC NR: AP6013289 (N) SOURCE CODE: UR/0413/66/000/008/0085/0085

27
B

AUTHORS: Zdanovich, V. G.; Sharikov, Yu. D.

ORG: none

TITLE: A method for determining the depth of shallow water basins. Class 42, No. 180815

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 85

TOPIC TAGS: waterway engineering, photo interpretation, photogrammetry

ABSTRACT: This Author Certificate presents a method for determining the depth of shallow water basins. The method makes use of aerial photographs. To simplify the work, a system of two floating buoys thrown off the aeroplane and fixed by threads of dissimilar lengths to a common anchor is photographed. The value of the desired parameter and the varying position of the measured point are calculated from the distance between the buoys measured on the aerial photograph (see Fig. 1).

UDC: 531.719.39:778.35

Card 1/2

L 05084-67

ACC NR: AP6013289

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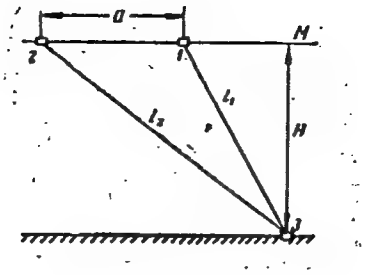
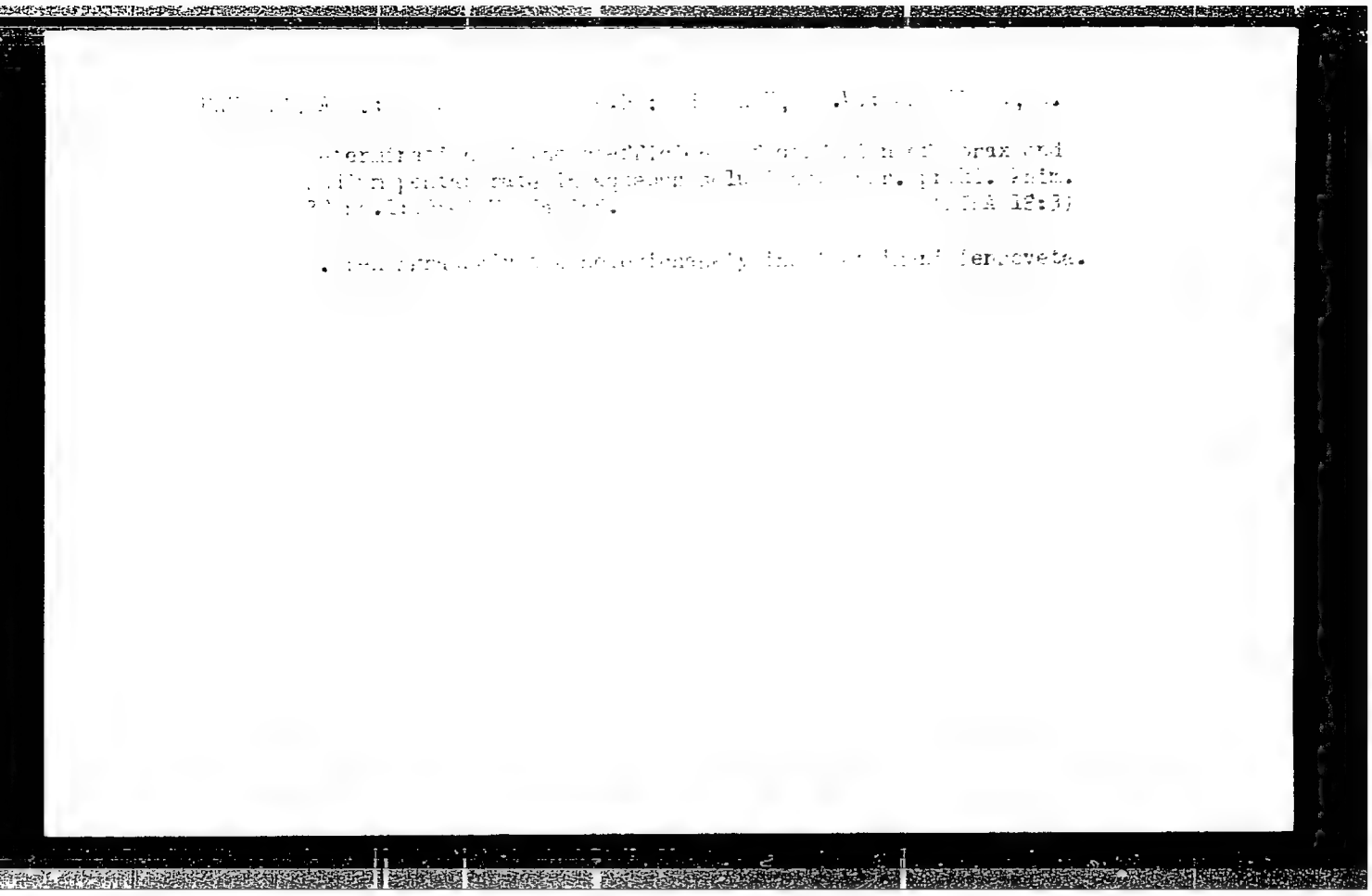
Fig. 1. 1 and 2 - buoys; l_1 and l_2 - threads; 3 - anchor; H - depth to be determined; a - distance measured on the aerial photograph; M - point of measurement.



Orig. art. has: 1 figure.

SUB CODE: 13,08/SUBM DATE: 02Apr65

Card 2/2 fv



[illegible], A.A.; SHARIKOV, Yu.V.

Kinetics of dissolution of borax crystals in a fluidized bed. Zhur. prikl. khim. 38 no.3:527-533 Mr '65.
(MIRA 18:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
Submitted July 1, 1964.

SHARIKOVA, A.I.

KARTSEVA, Ye.P., kandidat meditsinskikh nauk; SHARIKOVA, A.I.

Effect of teeth extraction on coronary circulation. Klin. med. 32 no.10:66-71 O '54. (MLRA 8:1)

1. Iz kliniki vnutrennikh bolezney (dir. zasluzhennyy deyatel' nauki prof. M.Ya.Ar'yev) Leningradskogo meditsinskogo stomatologicheskogo instituta.

(TEETH EXTRACTION,
eff. on coronary circ.)
(HEART, blood supply,
coronary circ., eff. of teeth extraction)

L 17950-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 ASD(a)-5 RM
ACCESSION NR: AP5002565 S/0079/64/034/007/2262/2267

AUTHOR: Sharikova, I Ye.; Al'bitskaya, V. M.; Petrov, A A.

TITLE: Investigations in the field of the chemistry of organic oxides. XXIII. Addition of methyldichlorosilane to divinyl and isoprene oxides

SOURCE: Zhurnal obshchey khimii, v. 34, no. 7, 1964, 2262-2267

TOPIC TAGS: organic oxide, silane compound, chemical bonding

Abstract: The addition of methyldichlorosilane to the oxides of divinyl (1, 2-epoxybutene-3) and isoprene (3-methyl-1, 2-epoxybutene-3) was studied. The reaction proceeded soomthly in both cases, addition occurring only at the Si-Cl bond; the Si-H bond was preserved. Infrared and nuclear magnetic resonance studies of the reaction products showed, that these alpha, beta-unsaturated oxides add methyldichlorosilane with cleavage of the oxide ring at the least hydrogenated carbon atom, i.e. in a different order from the corresponding saturated ocides; the double bond is preserved. In the case of isoprene oxide, a partial 1.4-addition may also occur. Orig. art. has 2 tables and 2 graphs.

Card 1/2

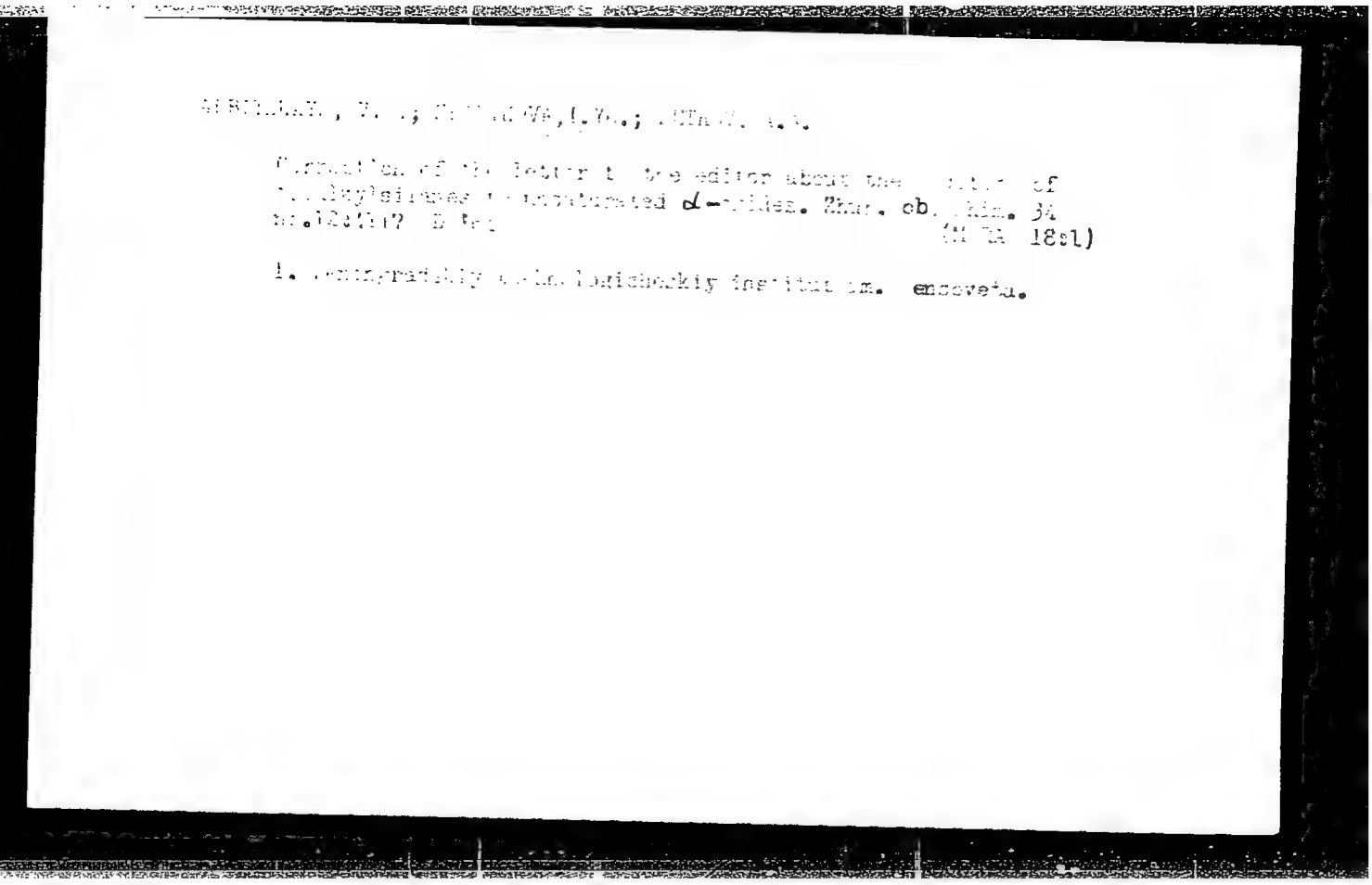
L 17950-65
ACCESSION NR: AP5002565

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute)

SUBMITTED: 24Apr63 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 007 OTHER: 002 JPRS

Card 2/2



USSR / Cultivated Plants. Potato. Vegetables. Melons. M-4

Abs Jour: Ref Zhur-Biol., 1958, No 10, 72989.

Author : Sharikova, V. P.
Inst : Tadzhik Scientific-Research Institute of Horticulture, Viticulture and Subtropical Crops.
Title : New Varieties of Vegetable Crops.

Orig Pub: Byul. nauchno-tekhn. inform. Tadzh. n.-i. in-t sadovodstva, vinogradarstva i subtrop. kul'tur, 1957, vyp. 1, 74-77.

Abstract: Through a method of selecting carrots (Daucus carota subsp. afganicus Zagor) of the local "Mshak" variety by contents of carotin according to external characteristics (color intensity, smooth surface, and small pith) a new "Mshaki-surkh" variety was introduced at the Institute in 1948-1955 which, in content of carotin, approaches the best European

Card 1/2

MELIK-STEP-NOVA, A. O., inzh., GRIGOR'EV, G. M., and SOKOLOVA, Ye. A.

Study of Mongugay deposit coals of the Maritime Territory.
Ugol. i brik. ugl. no. 30:3-4 '61. (MIRA 17:4)

KNOROZ, V.I., kand. tekhn. nauk; SHARIKYAN, Yu.E.

Resistance to motion of high-roadability automobiles on hard-surface roads. Avt. prom. no.1:22-24 Ja '58. (MIRA 11:2)

1. Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut (for Knoroz). 2. Moskovskoye vysshaye tekhnicheskoye uchilishche imeni Baumana (for Sharikyan).

(Automobiles--Testing)

113-58-3-5/16

AUTHORS: Knoroz, V.I., Candidate of Technical Sciences, Sharikyan, Yu.E.

TITLE: Roadability of an Automobile and Its Evaluation (Prokhodimost' avtomobilya i yeyё otsenka)

PERIODICAL: Avtomobil'naya Promyshlennost', 1958, Nr 3, pp 8-12 (USSR)

ABSTRACT: The roadability of an automobile is determined by its profile and support properties. The profile properties consist of the ability to surmount obstacles, ditches, etc; the support properties consist of the ability to traverse soft ground. Many factors determine the roadability of a motorcar. The most important of them are the momentum of the resistance against the movement (M_f), the momentum of the adherence of the leading wheels to the ground (M), and the momentum developed by the engine on the guiding wheels of the car (M_k). The momentum of the resistance against the movement depends on the type and condition of the supporting surface, the construction of the car, type and size of the tires, the speed of the car, etc. The maximal momentum on the leading wheels is limited by the adherence of the wheels to the ground. Formulas for the different momenta are cited.

Card 1/2

Roadability of an Automobile and Its Evaluation 113-58-3-3/16

In Figure 3 the dependence of the roadability of a car on the characteristics of the ground is shown. In determining the roadability for a given car on a given ground, as well as the evaluation of the ground, the use of a standard lead wheel is recommended.
There are 3 figures and 1 table.

ASSOCIATION: NAMI, MVTU imeni Bauman

AVAILABLE: Library of Congress

Card 2/2 1. Passenger vehicles-Design 2. Passenger vehicles-Roadability

SOV-113-58-10-6/16

AUTHORS: Khoroz, V.I., Candidate of Technical Sciences, Sharikyan, Yu.E.

TITLE: The Movement of an Automobile on Dry Sand (Dvizheniye avtomobilya po sukhomu pesku)

PERIODICAL: Avtomobil'naya promyshlennost', 1958, p 19 - 23 (USSR)

ABSTRACT: The article gives the results of driving tests over dry river sand, performed with a 6 x 6 "ZIL-121G" truck having a total weight of 8,300 kg. The truck was equipped with variable pressure tires in dimensions ranging from 11.00-18 to 14.00-18. Thirteen different processes were recorded simultaneously. Some of the test results are represented by graphics of tire deformation and pressure, etc. It was established that the most suitable tire pressure was 0.8 - 1.0 kg/cm^2 for tires 12.00-18 whereby the load on the truck must not exceed 2.5 tons. Under the same conditions the traction power at the hook is equal to 1,800 kg. The tested truck had a maximum passing capability factor of 0.85 when using tires 14.00-18 with 1.0 kg/cm^2 pressure. It was further established

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that existing methods for determining the traction factor on soft soil were not correct. It should be determined by the maximum magnitude of the moment transmitted to the wheels of the automobile during even motion with a partial slipping of the wheels. There are eight sets of graphs.

ASSOCIATION: NAMI

1. Automotive industry---USSR 2. Cargo vehicles---Test methods
3. Soils---Trafficability

SHARIKYAN, Yu. P., Master Tech Sci (diss) -- "Investigation of the effect of the air pressure in the tires on the movement of an automobile". Moscow, 1959. 18 pp (Min Higher Educ USSR, Moscow Order of Lenin and Order of Labor Red Banner Higher Technical School im N. E. Bauman), 150 copies (KL, No 9, 1959, 116)

KNOROZ, V.I., kand.tekhn.nauk; SHARIKYAN, Yu.E., assistent

Roadability test for motortrucks. Izv.vys.ucheb.zav.; mashinostr. no.3:107-114 '59. (MIRA 13:3)

1. Moskovskoye vysshoye tekhnicheskoye uchilishche imeni N.Ye.Baumana i Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut (NAMI).
(Motortrucks--Testing)

KNOROZ, V.I., kand.tekhn.nauk; SHARIKYAN, Yu.E., kand.tekhn.nauk

Distribution of torque on axles of a three-axle motortruck moving under variable road conditions. Izv.vys.ucheb.zav.; mashinostr. no.5:149-158 '60. (MIRA 13:7)

1. Moskovskoye vysshaye tekhnicheskoye uchilishche im. Baumana.
(Motortrucks—Dynamics)

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S/145/61/000/003/004/006
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AUTHORS: Bocharov, N.F., Candidate of Technical Sciences, Sharikyan, Yu.E., Canidate of Technical Sciences, Kradinov, Ye.B., Engineer, Sakharov, Yu.N., Engineer, Zakharov, S.P., Candidate of Technical Sciences, and Abramova, E.Ye., Engineer

TITLE: Design of a fixture for moulding pneumatic rollers size 1000 x 1000 x 250

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, mashinostroyeniye, no. 3, 1961, 83 - 87

TEXT: Pneumatic rollers are special wide tires with a very small hub diameter (usually the width is 1 and the hub 1/4 of the outside diameter) designed to carry vehicles over bad terrain such as snow, soft sand and mud. In this respect they can compete with caterpillar machines. Due to the large support area, small hub and low internal pressure (0.1 to 1.0 kg/cm^2) these rollers can be permit-

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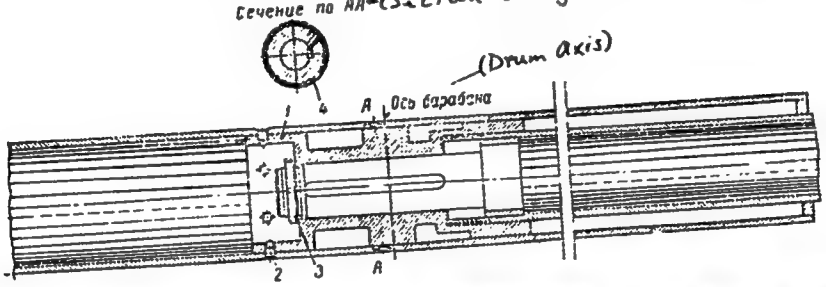
Design of a fixture ...

ted to deflect as much as 35 % of the profile. In the USSR testing of the rollers size 24 x 36 x 6" gave good results, but showed the need to increase the outside diameter, and the size 1000 x 1000 x 250 mm was designed. Equipment for vulcanizing ordinary tires could not be used and a new fixture had to be designed. The mounting drum for making these rollers is illustrated. It consists of 24 hollow sectors, 12 on each side, each of them is connected with the opposite sector by a plate. This drum is designed for use on machine SPD-A, on which it is fixed by means of the adaptor shown in Fig. 4.

Fig. 4.



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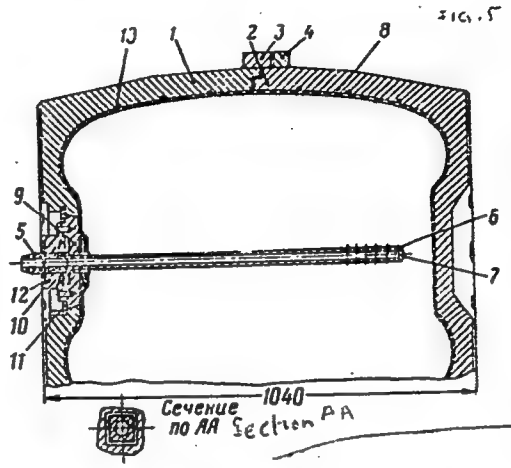
S/145/61/000/003/004/006
D205/D304

Design of a fixture ...

The press-form for vulcanizing the tube is given in Fig. 5.

Fig. 5.



Legend: 1 - Upper half; 2 - lower half; 3 - wedge; 4 - socket; 5 - standard cone with internal thread; 6 - tube; 7 - plug; 8 - tire tube; 9 - nut; 10 - insert; 11 - circular clip; 12 - sealing ring; 13 - wire net.

Card 3/4

Design of a fixture ...

Superheated water is introduced through the tube in the face of the upper half of the press-form. The principle of this design is new. To obtain circular and longitudinal grooves wire 13 is hammered on the inner surface to protrude 0.5 mm. The press-form for vulcanizing the tire is constructionally similar to that for the tube, except that the upper and the lower halves are made in two parts. There are 6 figures.

ASSOCIATION: MVTU im. N.E. Baumana (Moscow Technological College (MVTU) im. N.E. Bauman; NIISRP (Scientific Research Institute of the Tire Industry)

SUBMITTED: April 14, 1960

Card 4/4

Sharinyan, S. S. "The organization of surgical aid and the perspectives for its development in the Armenian SSR during the Fourth Five-Year Plan," (Report), Trudy III Zakavkazsk. s"yezda Khirurgov, Yerevan, 1949 (on cover: 1949), p. 23-33

SO: U-3220, 17 Dec. 52, (Letopis 'Zhurnal 'nykh Statey, No. 26, 1949).

[illegible], S. S.

Sharkhanyan, S. S. "Echinococcus disease based on the findings of the I Yerevan surgical clinic," (Report), Trudy III Zakavkazsk. s"yezda khirurgov, Yerevan, 194[illegible] (on cover: 1[illegible]), p. 303-307

SO: U-4470, 17 Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

SHARE ALIAN, S. S.

"In Memory of Ambartsum Serafimovich Kechek," Khirurgiya, No. 4, 1949, Prof.

SHARIMANYAN, S.S., prof.

Broadening indications for the use of spinal anesthesia. (MIRA 12:8)
Khirurgiia 35 no.6:124-125 Je '59.

1. Iz kafedry obshchey khirurgii (zav. - prof.S.S.Sharimanyan) Yerevanskogo meditsinskogo instituta.
(ANESTHESIA, SPINAL
indic. (Rus))

MALKHASYAN, Vigen Aramaisovich, doktor med. nauk, prof.; SHARIMANYAN, S.S., prof., nauchn. red.; SAAK, O.I., red.; KOSTANDYAN, V.D., tekhn. red.

[Technique of typical operations on the stomach] Tekhnika tipicheskikh operatsii na zheludke. Erevan, Armuchpedgiz, 1963. 81 p. (MIRA 17:3)

SHARIMANYAN, S.S.

Hemangiomas of the spine. Zhur. eksp. i klin. med. 3 no.1: 3-9'63. (MIRA 16:10)

1. Kafedra obshchey khirurgii Yerevanskogo meditsinskogo instituta.
(SPINE — TUMORS) (SPINE — SURGERY)

SHARIMANYAN, S.T.

Barre-Masson's vegetative neuralgia. Zhur. eksp. i klin. med. 2 no.5:7-16 '62. (MIRA 18:10)

1. Kafedra obshchey khirurgii Yerevanskogo meditsinskogo instituta.

KURBATOV, L.N.; KABANOV, A.N.; SIGRIYANSKIY, V.V.; MASHCHENKO, V.Ye.; MOCHALKIN, N.N.; SHARIN, A.I.; SOROKO-NOVITSKIY, N.V.

Generation of coherent radiation in specimens of gallium arsenide following electronic excitation. Dokl. AN SSSR 165 no.2:303-304 N '65. (MIRA 18:11)

1. Submitted March 15, 1965.

L 10241-66 EWT(d)/FBD/EWT(l)/EEC(k)-2/EPF(n)-2/T/EWP(k)/EWA(m)-2/EWA(h) SCTB/IJP(c)

ACC NR: AP5028275 WG/WW/AT SOURCE CODE: UR/0020/65/165/002/0303/0304

AUTHOR: Kurbatov, L. N.; Kabanov, A. N.; Sigriyanskiy, V. V.; Mashchenko, V. Ye.; Mochalkin, N. N.; Sharin, A. I.; Soroko-Novitskiy, N. V.

ORG: none

TITLE: Generation of coherent radiation in GaAs samples excited by electrons

SOURCE: AN SSSR. Doklady, v. 165, no. 2, 1965, 303-304

TOPIC TAGS: laser, semiconductor laser, electron beam, gallium arsenide, crystal lattice, electron

ABSTRACT: Laser action at 77K and at room temperature is reported in both n- and p-type GaAs excited with a beam of electrons. The Fabry-Perot cavity was prepared by cleaving in the (110) plane. The resonator mirror surfaces were separated by a distance of 50—60 μ. An electron beam device supplied electrons with energies up to 60 kev. The repetition rate and the pulse duration were 50—200 pulses per second and 9×10^{-8} sec, respectively. The maximum beam current at a beam diameter of 60—70 μ was 17 mamp. The electron beam was normal to the polished surface of the sample. The light was emitted from the faces normal to the polished faces. The threshold current densities were different for different samples and varied between 70 and 150 amp/cm^2. Since the effective mass of the electron and the width of the forbidden gap in GaAs are larger than in InSb and InAs (two of the other semiconductor lasers) and the lifetime of the electrons is very short, population inversion in

Card 1/2 UDC: 537.311.33